

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES



are the PATENT application of

Johannes Andreas Zaat

Serial No.: 09/817,085

Filed: March 26, 2001

For: Electric Lamp Having Aluminum-Silicon Connection Body

Group Art Unit: 2879

Examiner: Perry, Anthony T.

Confirmation No.: 9828

TRANSMITTAL LETTER

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Transmitted herewith for filing in the above-identified application are three (3) copies of Appellant's Brief on Appeal (6 pages); Check No. 6927 in the amount of \$320.00 for payment of the fee required by 37 C.F.R. 1.17(c); and a postcard receipt.

The Commissioner is hereby authorized to charge payment of any additional fees required for the above-identified application or credit any overpayment to Deposit Account No. 05-0460.

Respectfully submitted,

Martin Abramson  
Registration No. 25,787

Hand Delivered: June 16, 2003

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Attorney Docket No.: NL 000160  
1652.0006C

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*#13 Appeal Brief*

*M. Brunson*

*6/29/03*

**APPELLANT'S BRIEF ON APPEAL**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

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**1. REAL PARTY IN INTEREST**

The real party in interest is the assignee, U.S. Philips Corporation, a Delaware corporation. Koninklijke Philips Electronics, N.V., a corporation of the Netherlands, is the ultimate parent of U.S. Philips Corporation.

**2. RELATED APPEALS AND INTERFERENCES**

None

**3. STATUS OF CLAIMS**

Claim 1 is cancelled.

Claims 2 to 5 are pending.

Claims 2 to 5 are the claims appealed.

**4. STATUS OF AMENDMENTS**

No Amendments were filed after final rejection.

## **5. SUMMARY OF INVENTION**

The present invention is directed to an improved electric lamp wherein electric contact members in the lamp base and current supply wires are fastened to each other by means of a solidified connection body comprising aluminum-silicon, in particular aluminum plus 5 to 16% by weight of silicon (AlSi) (page 1, lines 11 to 19; page 2, lines 3 to 7). In the structure of the invention, the contact members (Figs. 1, 2 - No. 9; Fig. 5 - No. 29) and current supply wires (Figs. 1, 2 - Nos. 4,5; Fig. 5 - No. 25) are fused to the solidified connection body (Figs. 1, 2 - No. 10; Fig. 5 - No. 30) (Page 5, lines 1 to 5).

The AlSi connection body has a lower melting temperature than substances used for lamp connections in the prior art and thus during manufacture there is less thermal load placed on the base portion, and consequently less risk of deformation and fewer rejects (page 2, lines 4 to 9). In addition, AlSi was found to be resistant to electrochemical corrosion and have a good adhesion/wetting with respect to the base and shell portions (page 2, lines 10 to 13).

## **6. ISSUE**

Was the subject matter of claims 2 to 5 obvious under 35 U.S.C. 103 over Vause, U.S. Patent No. 3,885,186 in view of Essers et al., U.S. Patent No. 5,039,905 at the time the invention was made to a person having ordinary skill in the art to which the invention pertains.

## **7. GROUPING OF THE CLAIMS**

Claims 2 to 5 comprise a claim group.

## **8. ARGUMENT**

The claims require that the contacts and current supply wires be fused to a connection body of aluminum-silicon. Vause teaches the use of aluminum-silicon-copper in the superplastic state without fusing or melting (col. 1, line 65 to col. 2, line 6). Essers teaches the use of a connection body of alloys other than aluminum-silicon with fusing (col. 6, lines 41 to 54).

The final rejection states at page 3, first full paragraph:

“The Vause reference does not specifically teach the supply conductor being fused to the solidified connection body. However, fusing the supply conductor to the solidified connection body to form a secure joint is well-known in the art as evidenced by Essers (col. 6, lines 47 to 67). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have fused the supply conductor to the solidified connection body, since the selection of known methods for a known purpose is within the skill of the art.”

It is submitted that the rejection is not tenable because Vause cannot be modified to incorporate melting or fusing of aluminum-silicon. This is because not only does Vause “not specifically teach” the supply conductor being fused to the solidified connection body, as stated in the final rejection, but he requires that it not be fused.

Thus, in Vause, the material of the connection body is kept below its melting temperature (col. 2, line 1) so it can be in a superplastic state where it can flow between surfaces to be joined when exposed to infrared radiation. Indeed, the whole point of using a connection material in the superplastic state in Vause is to avoid soldering or welding operations, which in Vause’s view are disadvantageous (col. 1, lines 20 to 57).

As stated in Vause, col. 2, lines 4 and 5,

“no melting is involved”.

If there is no melting, there cannot be any fusing of materials. Thus, the reference, by its own terms excludes fusing to obtain certain alleged advantages. It is therefore not permissible to modify the reference to include a fusing step, as such is contrary to the stated requirements of the reference.

Additionally, the combination of references cannot be made because to do so would render Vause unsatisfactory for its intended purpose. As mentioned above, Vause at col. 1, lines 20 to 57 details his view of the disadvantages of soldering, welding type operations including the use of flux, which he seeks to avoid. Specifically, at col. 2, lines 3 to 6, Vause states:

“No flux is needed when carrying out the method source, no melting is involved, and hence contamination of machinery and consequent difficult maintenance is avoided.”

On the other hand, in Essers, as well as in the present invention, melting is involved and flux may be used (specification, page 3, line 10). These would be unacceptable to Vause and would render his process unsatisfactory for its intended purposed (including simplification of machinery maintenance). It is well established that if the proposed modification would render the invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900,221 USPQ 1125. Thus, there is no motivation from Essers to modify Vause in the way suggested in the final rejection, and the combination of references cannot be made.

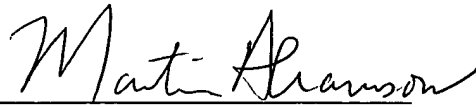
Moreover, the present invention uses AlSi primarily because its lower melting temperature is advantageous in avoiding rejects and deformations during manufacture. It is noted that there is nothing in Vause which suggests this advantage of AlSi, in fact since Vause uses the substance in the thermoplastic state, overheating is not even a concern in his method.

In addition to having a lower melting point (in comparison with aluminum), AlSi has other advantages which are not disclosed by the prior art. More particularly, AlSi was found to be resistant to electrochemical corrosion as well as affording a good adhesion/wetting of the connection body to the base and shell portions of the lamp. (Specification, page 2, lines 10 to 15). Significantly, there is no prior art in the record which discloses such advantages. It is certainly not established by the prior art that such advantages would result from the use of aluminum-silicon. In addition to the other reasons advanced above, the absence of such teachings render claims 2 to 5 to be unobvious and patentable.

Johannes Andreas Zaat  
Serial No.: 09/817,085

In view of the above, it is submitted that claims 2 to 5 are allowable.

Respectfully submitted,

A handwritten signature in cursive script, reading "Martin Abramson". The signature is written in dark ink and is positioned above a horizontal line.

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## 9. CLAIMS ON APPEAL

2. An electric lamp as claimed in claim 4, characterized in that said additive comprises 11 to 13.5% by weight of silicon.
3. An electric lamp as claimed in claim 4, characterized in that the connection body comprises a eutectic mixture of aluminum with approximately 12.5% by weight of silicon.
4. An electric lamp comprising  
a light-transmitting lamp vessel,  
an electric element in the lamp vessel,  
current supply conductors extending to the electric element,  
a lamp cap connected to the lamp vessel, which lamp cap has a shell portion and a base portion which each support an electric contact member, each electric contact member and a respective current supply conductor being fused to a solidified connection body comprising aluminum and an additive, wherein said additive comprises 5 to 16% by weight of silicon.
5. The electric lamp of claim 4 wherein said solidified connection body consists essentially of aluminum and silicon.